

TGAS: Ohio Issues 2011

Toxics Highlights

State Toxics Analysis

After years of work, OEPA has completed a state-wide data analysis/risk screening for Ohio air toxics. Ten years of monitoring data from 34 air toxics monitoring sites located in 16 Ohio counties have been compiled and evaluated as Ohio EPA's *2010 All Ohio Air Toxics Report*. The report takes each year's air toxics results and puts them together in a document that shows meaningful trends. While nine of the 16 counties are within the risk range deemed acceptable, seven counties have a slightly greater than 1 in 10,000 risk for additional cancers: Columbiana, Hamilton, Jefferson, Marion, Montgomery, Scioto and Washington. The concentrations of VOCs at three sites exhibit higher non-cancer risk levels. Heavy metal concentrations (most often manganese) at more than half of the air monitoring sites lead to an increased non-cancer health risk.

This study is a great way to tell the story of air toxics in Ohio and share it with the public, and it is an exceptional use of air toxics monitoring data. EPA congratulates OEPA on such a massive undertaking. We encourage OEPA to consider using the results of this analysis to further develop their toxics program to protect public health throughout the state of Ohio.

School Monitoring Initiative

On March 31, 2009, EPA released a list of priority schools for air quality monitoring, as part of an initiative to understand whether outdoor toxic air pollution poses health concerns to schoolchildren. In Ohio, six schools were chosen: Elm Street Elementary in Wauseon, OH; La Croft Elementary in East Liverpool, OH; Academy of Arts and Humanities in Warren, OH; The Ohio Valley Educational Service Center and Warren Elementary in Marietta, OH; and Whitwell Elementary in Ironton, OH.

Manganese concentrations were found to be elevated at the East Liverpool school and the two Marietta schools. Monitoring will be continued in both communities. OEPA's enforcement action against S.H. Bell in East Liverpool should greatly reduce manganese emissions, and the continued monitoring will allow us to verify these reductions. In Marietta, regulatory efforts as part of the Residual Risk process are underway, which may reduce manganese concentrations in the area.

OEPA has been very cooperative and has made every effort to assist EPA with this project, and EPA appreciates their efforts. Both the main OEPA office and the local offices have been exceptionally well-prepared and have exceeded our expectations. They have been very willing to work with us as we extend monitoring in the East Liverpool and Marietta areas.

Development of Vapor Intrusion Guidance

OEPA has long been involved in a great deal of vapor intrusion work and has recently developed a final draft of their vapor intrusion guidance. This guidance provides a stepwise framework for site characterization and investigation of the vapor intrusion exposure pathway. Evaluation of the indoor air exposure pathway involves characterizing subsurface VOC releases, obtaining appropriate environmental data, potential use of fate and transport models to predict indoor air concentrations from vapor intrusion, and conducting indoor air sampling, if necessary. This guidance outlines the technical aspects of evaluating this exposure pathway and provides recommendations for elements that should be included in a site/facility investigation. Ohio EPA anticipates that this guidance will be used by regulators, responsible parties, environmental consultants, community groups, and property developers.

EPA commends OEPA on their dedication to this important issue.

Toxics Concerns

Climate Change

EPA appreciates Ohio's efforts to implement energy efficiency programs. OEPA has had good participation in EPA Region 5's State Climate Change calls. However, key OEPA climate change staff left over a year ago, and this position is still vacant.

Toxics FYI

Clyde Cancer Cluster

In December 2007, OEPA was contacted by Sandusky County Health Department (SCHD) to discuss the findings of a collaborative study with Ohio Department of Health (ODH) in which they investigated a higher than expected number of childhood cancer diagnoses in Clyde, Ohio, and the surrounding area.

OEPA, ODH, and SCHD met with the affected families in March 2008 to discuss information regarding the environmental conditions in their area. Previous work with the affected families by ODH and SCHD has not revealed any environmental similarities. This lack of information drove OEPA to create a more thorough investigatory instrument for the purpose of understanding the citizens' lifestyles and potential exposure pathways. This questionnaire is environmentally balanced, including information about indoor and outdoor air concerns, as well as other media and routes of potential exposure. This instrument may allow unusual coincidences between affected families to be discerned and may be useful in future health/environmental investigations. EPA understands that ODH has already used the new instrument in other areas of study within the State.

Ohio EPA conducted additional investigations to try to identify unexpected environmental exposure(s), evaluated area companies' compliance with environmental laws, and reviewed all existing information on local conditions to look for any unusual

environmental conditions. Ohio EPA conducted air monitoring for VOCs and heavy metals at several locations in the area from January 2009 to January 2010 and worked with ODH to sample for radionuclides and radon in order to develop a thorough understanding of ambient and indoor air quality. During that time, OEPA detected no elevated levels of VOCs or heavy metals. Additionally, the area is in compliance with NAAQS for all criteria pollutants.

OEPA is to be commended for its responsiveness to this issue and dedication to public health. The issues involved in this health and environmental evaluation extended beyond standard practices, and it is clear that OEPA and partners put a great deal of work, thought, and care into this study.

New MACT Staff Hired

EPA is pleased to hear that OEPA has hired a new staff person to work on MACT issues and address the backlog of MACT summaries. This new employee has also been instrumental in developing new methods for electronic/web communication and is an asset to the program.

Special Air Toxics Studies

Ohio EPA's air toxics program has also continued work supporting various special studies and enforcement activities for the Division. The manganese air monitoring and risk analysis in both Marietta and East Liverpool Ohio has, and continues to support special health investigations and enforcement actions in those communities. The ambient air monitoring network designed for the underground reaction at the Countywide Landfill was, and still is state-of-the-art for measuring air emissions from landfill fires. Another landfill fire in Southwest Ohio is receiving similar attention. The prompt assistance of the District Offices and Local Air Agencies in air risk analysis and permitting issues is a continued strength of the Air Toxics Unit.

National Emissions Inventory

Ohio submitted 2008 emission inventory data for 605 facilities for criteria pollutants and 308 facilities for hazardous air pollutants (HAPs), representing Title V sources only. The submittal window may re-open in 2011 for the 2008 criteria and HAPs inventory and a version 2 of the 2008 inventory may be released. Ohio EPA's 2009 point source submittal, which is also in the emission inventory system (EIS), reflects a larger number of facilities than for 2008 because Ohio EPA management has approved submittal of both Title V sources and synthetic minor sources. Inventory data for 2010 Type A sources for criteria pollutants will be due by December 31, 2011.

National Air Toxics Assessment (NATA)

We greatly appreciate Ohio EPA's effort in reviewing the emissions inventory data for the facilities identified as potentially contributing to high risk numbers in the draft 2005 NATA. Ohio EPA submitted corrections and comments to OAQPS by the deadline in February. The 2005 NATA was publically released March 11, 2011. OAQPS has

generated a list of potential facilities associated with high-risk in NATA and we have shared that list with Ohio EPA.

RARE Grant

In June 2009, EPA funded a study of potential exposure to and health effects of airborne manganese in Marietta OH, titled "Relationship of Airborne Manganese Exposure to Neurobehavioral and Health Status". Rosemarie Bowler (San Francisco State University) is principal investigator. The study surveyed and tested 100 adult Marietta citizens in August 2009 and compared them with a corresponding group of 100 Mount Vernon OH adults, also evaluated in August 2009. Neurologic and neuropsychological tests were conducted, and questionnaires and blood samples were collected. Preliminary results were presented at a public meeting in Marietta in June 2010.

Overall, results of this epidemiologic study did not support findings of clear-cut adverse health effects from manganese concentrations in air and blood in the town of Marietta. While slight differences were observed between Marietta and the control city of Mt. Vernon, Ohio, overall, both sets of tests results were within the average range of the general population.

Dr. Bowler has applied for another RARE grant to perform a similar study in East Liverpool, Ohio.

Region 5 Auto-body NESHAP Environmental Results Program (ERP)

The Ohio EPA Office of Compliance Assistance and Pollution Prevention (OCAPP) have partnered with other EPA Region 5 State Small Business Environmental Assistance Programs (SBEAPs), other assistance staff and EPA Region 5's Air Program staff to develop an ERP for the auto-body refinishing sector affected by the subpart 6H area source NESHAP.

The ERP is a unique environmental performance initiative that features a multi-media, sector-based regulatory approach that replaces facility-specific State permits with industry wide environmental performance standards and annual certifications of compliance. ERP also increases government's cost effectiveness by allowing States to dedicate its limited resources to the areas of greatest concern. The program applies three innovative tools to enhance and measure environmental performance: an annual self-certification of compliance by companies to increase self evaluation and accountability; compliance assistance from the State through outreach and innovative workbooks; and a new performance measurement methodology to track results, determine priorities and strategically target inspections and compliance assistance efforts.

EPA Region 5 has been working closely with all State Environmental and Small Business Agencies to support the ERP for the recently promulgated auto-body Refinisher area source standard. EPA Region 5's Air Enforcement and Compliance Assurance Branch has agreed to support the ERP by conducting all post compliance inspections of the sampled facilities in the Region. This will address any delegation issues associated with enforcement authority and credentials for this source category.

Currently, Region 5 States are finishing up their outreach (phase 2) in the ERP project. All materials were developed and posted on line. Each state's program has been working with associations, suppliers or other contacts to provide training and materials to shops. Region 5 States have sent emails or letters to contacts to notify them prior to or around the time the States mailed the self-certification materials.

Also the SBEAPs and EPA Region 5 have coordinated a final inspection checklist and SBCAAP has provide EPA with their randomized urban lists to use for the final post inspections (phase 3) of the ERP.

Ferroalloys Residual Risk

Currently, EPA is in the final evaluation stage for the residual risk and technology review of the ferroalloys MACT source category. In September 2010, OAQPS received Eramet's final response for information collected through an ICR. The residual risk assessment is an evaluation of the health and environmental risks remaining after the technology-based standards (MACT) has been promulgated.

On September 27, 2010, EPA entered into a Consent Decree that established proposal and final action dates for certain source categories, of which, the ferroalloy production source category is one. Therefore, the rule proposal and final rule action dates for the ferroalloy source category is October 31, 2011 and June 29, 2012, respectively.

Utility Mercury and Air Toxics Standards

On March 16, 2011, EPA proposed a rule that would reduce emissions from new and existing coal- and oil-fired power plants, and would establish national standards to reduce mercury, arsenic, chromium, lead and other emissions. The Agency must promulgate final rules by November 16, 2011, and sources must comply within 3 to 4 years. The Agency will promulgate MACT rules under section 112 of the Clean Air Act. While some States already have requirements for power plant controls on mercury emissions, sources subject to the new rule will also need to comply with the Federal requirements. States will have to ensure the new rule applicable requirements are listed in their Title 5 permits.

Great Lakes Funding

Ohio EPA still participates in the Great Lakes Atmospheric Deposition (GLAD) process with the Great Lakes Commission and the other seven Great Lakes States. EPA negotiated a mercury monitoring project with Ohio for the FY2010 GLAD funding. Any GLAD funding available for FY2011 will also be provided directly to the state agencies.

Modeling Issues

Changes to the NAAQS over the last couple years have impacted dispersion modeling activities and we recognize that there have been many issues associated with modeling for the new standards, particularly the new 1-hour standards for NO₂ and SO₂. Earlier this year, EPA released guidance for NO₂ and SO₂ modeling, which will address some, but not all of the modeling related issues. Additionally, updated models and modeling

tools have been released which will facilitate the modeling process for the new NAAQS. We look forward to increased interaction with the OEPA modeling staff as we confront these issues and make sure that new modeling techniques are appropriately vetted before finalization.